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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,299	02/27/2004	Hiroshi Nagame	249087US2	4936
22850	7590	11/18/2005		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER BEATTY, ROBERT B	
			ART UNIT 2852	PAPER NUMBER

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,299

Applicant(s)

NAGAME ET AL.

Examiner

Robert Beatty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40 is/are rejected.
- 7) ☒ Claim(s) 1-39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The abstract of the disclosure is objected to because on line 5, delete "s".
Correction is required. See MPEP § 608.01(b).

3. The drawings are objected to because Photographs 1 and 2 are unclear. The applicant should increase their size so that they depict what the applicant intends to show. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Claims 1-40 are objected to because of the following informalities:

in claims 1,23 and 40, the applicant phrases the claims as if the measuring device was part of the image forming apparatus (during normal operation) which it is not. It is recommended that the applicant insert something like "wherein the frictional resistance is measured by a frictional resistance measuring device having a belt, load, etc..." so it is clear that the measuring device is separate from the image forming apparatus.

in claim 1, lines 5-7, it is unclear whether the applicant intends to claim both the surface roughness and the maximum height or only one or the other. It is believed that applicant intends to claim only one or the other and in this case on line 5, "--either--" should be inserted after "has", "either of" should be deleted and on line 6, "and" should be changed to an "--or--". Similar corrections should be made to claims 23 and 40.

in claim 1, line 20, "mm²" should be changed to "--mm²--". Similar correction should be made to claims 23 and 40.

in claim 1, line 21, "polyurethane flat type" is grammatically awkward. See also claims 23 and 40.

in claims 13 and 32, line 2, insert "--an--" before "upstream";

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in claim 14, line 3, change "and" to --or--;

in claim 18, line 2, change "and" to --or--;

in claim 22, line 3, change "and" to --or--;

in claim 36, line 2, change "and" to --or--;

Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikesue (JP# 06-138685).

Ikesue teach an image forming apparatus comprising a photosensitive drum 7, a charger 6 for charging the photosensitive drum, a developing device 1 for developing a latent image into a toner image, a transfer device 22,25 for transferring the toner image to a recording sheet carried on a transfer drum 23, and a cleaning device 8 for cleaning the residual toner off the photosensitive drum. An electrophotographic process produces a toner image on the recording sheet. The photoreceptor has a 10 point average surface roughness Rz (JIS) of between 0.01 - 0.5 μm and a surface roughness between 0.2 - 1.2 μm . Specifically, Ikesue (JP) teach

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everything claimed except the specific frictional resistance of the photosensitive drum measured by a specific measuring device. However, since this is a process claim, the patentable novelty must be in the process steps not the specific structure used in the process. See MPEP 2112.02, Ex parte Pfeiffer, 1962 C.D.408 and Ex parte Kangas, 125 USPQ 419. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the process claimed is disclosed by Ikesue (JP) albeit by a different structure.

6. Claims 1-39 are allowable over the prior art of record.

The applicant claims an image forming apparatus which uses a photoconductor having a frictional resistance R_f between 45 gf and 200 gf which is measured by a specific frictional resistance measuring device. Although applicant discloses that JP# 11-249328 discloses this range of frictional resistance (see spec. pages 17-19), the way which it is measured is different which would change the values read on the measuring unit thus this reference in fact does not teach the claimed frictional resistance values at least as measured by applicants measuring unit. The examiner believes this is reasonable since the frictional resistance depends on not only the coefficient of friction of the photoconductor but also on the coefficient of friction of the member in contact with the photoreceptor in the measuring device (in this case a polyurethane flat belt).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sako (JP), Sasame et al., Terrell et al., Kamano, Yamaki et al., and Nagame et al. all teach various photoreceptors.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is (571) 272-2130. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Robert Beatty". The signature is fluid and cursive, with a large, stylized "B" at the end.

Robert Beatty
Primary Examiner
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November 14, 2005